

**REMARKS**

Claims 17 and 19-23 are pending in this application. By this Amendment, claim 17 is amended and claims 1-16 and 18 are canceled without prejudice to or disclaimer of the subject matter therein. Support for the amendments to claim 17 can be found in the specification as originally filed, for example, at paragraphs [0013], [0040] and [0056]-[0062]; in FIGs. 3 and 4A-4D; and in original claims 17 and 18. No new matter is added by these amendments.

Applicant appreciates the courtesies shown to Applicant's representative by Examiner Quarterman in the March 7 and March 20, 2006, telephonic interviews. Applicant's separate records of the substance of the interviews are incorporated into the following remarks.

**I. Objection to the Specification**

The Office Action objects to the specification as exceeding the 150-word limitation. Applicant respectfully submits that the attached amended Abstract complies with the requirement that the Abstract not exceed 150 words in length. The Abstract has also been amended to correct additional informalities therein. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the objection to the Abstract.

**II. Claim Rejection Under 35 U.S.C. §102**

The Office Action rejects claims 1-3, 5-8, 17-19 and 21-23 under 35 U.S.C. §102(b) over U.S. Patent No. 6,469,438 to Fukuoka et al. Applicant respectfully traverses this rejection with respect to claims 17, 19 and 21-23, claims 1-3, 5-8 and 18 having been canceled herein.

Independent claim 17 sets forth a "method of producing an electroluminescence apparatus, comprising forming a light-emitting layer that emits red light, forming a light-emitting layer that emits green light, forming a light-emitting layer that emits blue light, and forming a layer containing an organic metal compound to contact only the layer that emits

blue light; wherein the organic metal compound contains a metal quinoline complex; wherein the organic metal compound-containing layer is not formed on the layer that emits red light; and wherein the organic metal compound-containing layer is not formed on the layer that emits green light." Claims 19 and 21-23 depend, directly or indirectly, from claim 17 and include all of the limitations thereof.

Fukuoka discloses an electroluminescence apparatus including a glass substrate (22), anode layers (10) that are formed on the substrate, a plurality of light-emitting layers that emit blue light (30), green light (32) or red light (34) and that are formed on the anode layers, and cathode layers (12) that are formed on the light-emitting layers. *See* Fukuoka, col. 18, lines 47-56; Fig. 14. Fukuoka also teaches that an electron-injecting layer, which may include a metal 8-quinolinole complex, may be used to transfer electrons injected from the cathode layer to the light-emitting layers. *See* Fukuoka, col. 14, line 26 - col. 15, line 14; col. 15, lines 58-61. Based on these teachings, the Office Action takes the position that the claimed method of producing an electroluminescence apparatus is anticipated by Fukuoka. Applicant respectfully disagrees.

In the claimed method, light-emitting layers that each emit one of red light, green light and blue light are formed, and an organic-metal compound-containing layer is formed on the layer that emits blue light. The claimed organic-metal compound-containing layer, which includes a metal quinoline complex, is formed on the blue light-emitting layer, but not on the layers that emit either red or green lights. This allows the light-emitting efficiencies of the blue, red and green light-emitting layers to be well balanced. *See* Specification, [0018].

In contrast, Fukuoka does not teach an electroluminescence apparatus or a method of making an electroluminescence apparatus in which its metal 8-quinolinole complex-containing electron-injecting layer is formed only on a layer that emits blue light, but not on layers that emit red or green lights. *See generally* Fukuoka. Rather, Fukuoka teaches that its

metal 8-quinolinole complex-containing electron-injecting layer may be formed to contact its organic light emitting layers, and does not teach forming the electron-injecting layer to contact one or more but not all of its organic light emitting layers. *See* Fukuoka, col. 14, line 26 - col. 15, line 14. In particular, Fukuoka does not teach treating its blue light-emitting layer differently than its red and green light-emitting layers, with respect to its metal 8-quinolinole complex-containing electron-injecting layer. *See generally* Fukuoka.

Thus, although Fukuoka teaches forming its metal 8-quinolinole complex-containing electron-injecting layer in contact with its blue, red and green organic light-emitting layers, Fukuoka does not teach "forming a layer containing an organic metal compound to contact only the layer that emits blue light; ... wherein the organic metal compound-containing layer is not formed on the layer that emits red light; and wherein the organic metal compound-containing layer is not formed on the layer that emits green light," as required by independent claim 17.

For at least this reason, claim 17 and its dependent claims 19 and 21-23 are patentable over Fukuoka. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

### **III. Claim Rejection Under 35 U.S.C. §103**

The Office Action rejects claims 4 and 20 under 35 U.S.C. §103(a) over U.S. Patent No. 6,469,438 to Fukuoka et al. in view of U.S. Patent No. 6,821,649 to Kambe et al. Applicant respectfully traverses this rejection with respect to claim 20, claim 4 having been canceled herein.

Claim 20 depends from and includes all of the limitations of claim 17, which is set forth above.

As discussed above with respect to claim 17, Fukuoka does not disclose, nor does it suggest, a method of producing an electroluminescence apparatus including "forming a layer

containing an organic metal compound to contact only the layer that emits blue light; wherein the organic metal compound contains a metal quinoline complex; wherein the organic metal compound-containing layer is not formed on the layer that emits red light; and wherein the organic metal compound-containing layer is not formed on the layer that emits green light," as set forth in independent claim 1. Kambe does not remedy the shortcomings of Fukuoka.

Kambe teaches methods for producing electroluminescence apparatuses including forming electron-injection layers containing organic metal complexes. *See* Kambe, col. 8, lines 30-67. While Kambe discloses a broad range of organic ligands, including metal quinolinol complexes, that can be used in such organic metal complexes, Kambe does not teach or suggest applying a metal quinoline complex-containing layer to a light-emitting layer that emits blue light but not applying a metal quinoline complex-containing layer to light-emitting layers that emit either red or green light. *See generally* Kambe. Rather, Kambe teaches that its metal quinoline complex-containing layers are applied to all of its light-emitting layers, which emit either red, green or blue light. *See* Kambe, col. 8, lines 60-67. Thus, Kambe does not provide any motivation to modify the method of Fukuoka to form electron-injecting layers containing metal quinolinole complexes on the light-emitting layer that emits blue light, but not on the light-emitting layers that emit either red or green light. Rather, both references teach applying metal quinolinol complex-containing layers to all light-emitting layers, including layers that emit either red or green light.

For at least these reasons, claim 20 is patentable over Fukuoka in view of Kambe. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

#### **IV. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 17 and 19-23 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachments:

Amended Abstract  
Request for Continued Examination

Date: March 14, 2006

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